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**LANDSAT DATA CONTINUITY
MISSION
MISSION OPERATIONS ELEMENT
CONTRACT DATA REQUIREMENTS
LIST (CDRL)**

May 1, 2007



National Aeronautics and
Space Administration

**Goddard Space Flight Center
Greenbelt, Maryland**

**LDCM PROJECT
DOCUMENT CHANGE RECORD**

Sheet: 1 of 1

REV LEVEL	DESCRIPTION OF CHANGE	DATE APPROVED

Section	Type	Description	Resolution Due By	Responsible Party

TABLE OF TBDS / TBRs / TBSS

The term “To Be Determined” (TBD) applied to a missing requirement means that the contractor shall determine the missing requirement in coordination with the Government. The term “To Be Supplied” (TBS) means that the Government will supply the missing information in the course of this contract. The term “To Be Reviewed” (TBR) means that the requirement is subject to review for appropriateness by the contractor or the Government, with approval by the Government. The Government may change TBR requirements in the course of this contract.

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1.0 INTRODUCTION

This Contract Data Requirements List (CDRL) document defines the requirements for deliverable documentation to be provided by the Mission Operations Element (MOE) Contractor. Section 2.0 includes definitions and instructions for mailing and/or distribution. Table 3-1 presents the CDRL item by item, with due dates, quantity, and media format. Section 4.0 provides the Description of Required Data (DRD), a description of each item which provides the use of the deliverable and the required preparation information. Except where specifically indicated to the contrary, the formats and drawing standards used shall be those normally used by the MOE Contractor and by its subcontractors.

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2.0 DEFINITION OF DUE DATES/MATURITY, DEFINITION OF CATEGORIES, AND MAILING DISTRIBUTION INSTRUCTIONS

2.1 DUE DATES/MATURITY - RELATED DEFINITIONS

The following definitions apply to the "DUE DATE, MATURITY" column in Table 3-1. Unless otherwise specified, deadlines are in working days.

DUE DATE:

- (1) M-SRR, M-PDR, M-CDR, GS-PDR, GS-CDR, MOR, FOR, ORR, OAR, other milestone reviews, etc.: MOE System Requirements Review, MOE Preliminary Design Review, MOE Critical Design Review, Mission Operations Review, Flight Operations Review, Operations Readiness Review, On Orbit Acceptance Review etc. Electronic distribution to be delivered to the Government 5 working days prior to review, unless otherwise stated.
- (2) As Generated, Update As Required (UAR): After each initial edition, revision, addition, etc. Items that are critical to schedule, performance, or interface shall be transmitted to GSFC by facsimile or express mail within 48 hours of generation. Where available, an electronic version shall also be provided.
- (3) Monthly: Submitted on monthly basis
- (4) T: Launch Date
- (5) DACA: (Calendar) Days After Contract Award
- (6) E: Electronic copies are due at the same time as hard copies unless otherwise specified

(b) MATURITY

- (1) Initial: The first submission of an item which will be revised and resubmitted at a later date.
- (2) Preliminary: An early submission of an item. To be completed as is practicable at the time of preparation. Preliminary submittals are written with the best available current information and are resubmitted when further information becomes available.
- (3) Final: The complete, thorough submission of an item for approval, review, or

information that, to the best of the contractor's knowledge and intention, will not require further revision or updates. However, this does not preclude updating if later found to be necessary. Any updates shall require the same "approval/review" process as was required for the original submissions.

- (4) Current: The delivery is written with the best up-to-date information available at the time.
- (5) Update: The delivery is revised with the best up-to-date information available at the time.

Other entries in the "DUE DATE, MATURITY" column are self-explanatory.

2.2 QUANTITY - RELATED DEFINITIONS

The quantities to be delivered shall be per the CDRL listing in column "Quantity (QTY)" in Table 3-1 of this document. If separate quantities are not specified for separate submission due date/maturity items, then the listed quantity applies to all submissions.

2.3 MEDIA - RELATED DEFINITIONS

The following definition applies to the "MEDIA" column in Table 3-1.

H – Hardcopy(s) of this documentation shall be delivered to the Contracting Officer at GSFC Code 427.

E - Data items shall be delivered in electronic format to a GSFC Landsat specified web portal unless otherwise noted in Table 3-1. Quantities refer to hardcopies, not electronic copies. The Contracting Officer shall be notified of electronic submission of the deliverable in writing. Electronic deliverables shall be delivered in the following formats unless otherwise approved by the government:

Text Documents: PDF (searchable) or MSWord
 Presentations: PDF (searchable) or PowerPoint
 Spreadsheets: Microsoft Excel
 Database: Delimited ASCII files accompanied with database schema document defining tables and entries.
 Schedules: PDF and MS Project
 Schematics and Drawings: Design Web Format (DWF) and PDF
 Photographs: JPEG or current industry standard.
 Video: Any readily available open standard (e.g., AVI, MPEG)

R – For Reviews, hardcopies will be made available at the review site for government representatives. (Generally, this will be in addition to electronic copies being made available prior to the review.) The quantity specifies the number of hardcopies to be available at the review.

If separate distribution instructions are not specified for separate submission due date/maturity items, then the listed distribution applies to all submissions.

2.4 CATEGORY - RELATED DEFINITIONS

The following definitions apply to "Submission Category (CAT)" column in Table 3-1. If separate approval instructions are not specified for separate submission due date/maturity items, then the listed approval instruction applies to all submissions.

- A Approval: CDRL items in this category require approval by the GSFC Contracting Officer's Technical Representative (COTR) or Contracting Officer prior to use by the contractor. Receipt by the Government shall occur within the time specified in the "Due Date" column of Table 3-1 of this document. Requirements for re-submission shall be as specified by the Contracting Officer. For most cases the contractor will be required to resubmit the document within 14 calendar days of receiving comments from the Government. If the contractor has not received response from GSFC within 30 calendar days of delivery of a CDRL item, the contractor may proceed as if the document has been approved.
- R Review. Documents in this category require delivery to the Government prior to use and within the time period specified in the "Due Date" column of Table 3-1 of this document. They are subject to evaluation by the Government or its designated representatives to determine Contractor effectiveness in meeting contract objectives. Upon submission, the Contractor may proceed with associated work while the Government reviews the submission.
- I Information. Data in this category shall be delivered to the Government within the time period specified in the "Due Date" column of Table 3-1 for the purpose of determining current program status, progress, and future planning requirements.

3.0 LDCM CONTRACT DATA REQUIREMENTS LIST

Table 3-1 comprises the LDCM Contract Data Requirements List.

The Table is in the following order:

Program Management (PM)
Reviews (RE)
System Engineering (SE)
Mission Operations (MO)

Table 3-1 Contract Data Requirements List (CDRL)

No.	MANAGEMENT	DUE DATE, MATURITY	QTY	MEDIA	CAT
PM-1	Monthly Project Status Reviews (MSR)	Monthly (nominally the last Wednesday of each month)	5	E, R	I
PM-2	Integrated Master Schedules (IMS)	- Initial 30 DACA	3	H, E	I
		- Update Monthly, delivered 7 days prior to MPSR	3	H, E	I
PM-3	CADRE Technical Data	- 60 DACA, Preliminary	2	H, E	R
		- M-PDR-30 days, Update	2	H, E	R
		- M-CDR+15 days, Update	2	H, E	R
		- Post-Launch, Final	2	H, E	R
PM-4	Final Report	Delivered incrementally at: M-CDR MOC Installation Launch – 60 days Acceptance + 30 days	2	H, E	I
PM-5	Engineering Peer Review Plan	- with Proposal, Preliminary	2	H, E	I
		- 35 DACA, Final	2	H, E	A
PM-6	Earned Value System Management Plan	- Preliminary submission after notification of selection, but prior to contract award	1	E	I
		- Initial submission 60 DACA	1	E	R
		- Updated if EVM System Architecture changes	1	E	R

No.	MANAGEMENT	DUE DATE, MATURITY	QTY	MEDIA	CAT
PM-7	Financial Reports	533Q: Quarterly 533M: Monthly	4 4	H, E H, E	R R
PM-8	Cost Performance Reports	- Formats 1,3,5 Monthly (no later than 15 calendar days after accounting calendar month end date)	1	H, E	I
PM-11	Project Management Plan	30 DACA, Final	2	H, E	R
PM-13	Organizational Conflict of Interest Avoidance Plan	45 DACA, Final	2	H, E	A

No.	REVIEWS	DUE DATE, MATURITY	QTY	MEDIA	CAT
RE-1	MOE System Requirements Review Data Packages	Electronic copy in Project library 5 days prior to review. Hard copies at review.	10	H,R,E	I
RE-2	MOE Preliminary Design Review Data Packages	Electronic copy in Project library 5 days prior to review. Hard copies at review.	10	H,R,E	I
RE-3	MOE Critical Design Review Packages	Electronic copy in Project library 5 days prior to review. Hard copies at review.	10	H,R,E	I
RE-5	MOE Pre-Delivery Review Data Packages	Electronic copy in Project library 5 days prior to review. Hard copies at review.	10	H,R,E	I
RE-6	Input to Ground System and Mission Reviews	Electronic copy in Project library 5 days prior to review. Hard copies at review.	50	H, R, E	I
RE-7	Engineering Peer Review Data Packages	Hard copies at review.	10	H	I

No.	SYSTEMS ENGINEERING	DUE DATE, MATURITY	QTY	MEDIA	CAT
SE-1	Engineering Change Requests, Deviations, and Waivers	Class I, As Generated Class II, As Generated	2 -	H, E E	A I
SE-2	Contractor Generated Internal Technical Information	As Requested	2	Original format (H or E)	I
SE-6	System Performance Verification Plan and Matrix	10 days prior to M-PDR, preliminary 10 days prior to M-CDR, update 15 days prior M-PR, Final Updates As Required	5	H, E	A
SE-7	Verification Reports	Within 30 days after each verification, Final	2	H, E	R
SE-8	Configuration Item Identification List	M-PDR, Preliminary M-CDR, Final	2 2	H, E H, E	I I
SE-13	Specification Tree	M-SRR, Final	2	H, E	I
SE-20	Trades and Analyses	Initial, M-PDR Update, M-CDR Updates summarized twice per year thereafter	3 3 3	H, E H, E H, E	R R R
SE-23	Acceptance Data Package	At OAR	2	H, E	A

No.	MISSION OPERATIONS ELEMENT	DUE DATE, MATURITY	QTY	MEDIA	CAT
MO-1	Mission Operations Element Concept of Operations Document	Electronic copy in Project library 5 days prior to Ground Segment SRR	-	E	R
		Hard Copy	3	H,E	R
MO-2	Mission Operations Element Interface Control Documents (ICDs)	Draft version at M-PDR	3	H,E	R
		Final version at M-CDR	3	H,E	R
MO-3	Mission Operations Element Lower-Level System Requirements Document	Electronic copy 5 days prior to M- SRR	3	H, E	I
MO-4	MOE Test Plans	Draft 2 weeks after M-CDR	3	H,E	R
		Final 2 weeks prior to applicable test	3	H,E	R
MO-5	Mission Operations Element Test Procedures Document	Draft 2 weeks after M-CDR	3	H,E	I
		Final 2 weeks prior to applicable test	3	H,E	I
MO-6	Mission Operations Element Test Reports	15 calendar days after Test, Final	-	E	I
MO-7	MOE Installation, Setup, and Configuration Procedures	With each MOE delivery	3	H, E	I
MO-8	MOE Operations Handbook	At each MOE delivery, preliminary and updates	20	H, E	R
		FOT training, Final	20	H, E	R
MO-9	MOE Software Development Management Plan (SDMP)	M-SRR	5	H, E	R
MO-10	MOE Software Version Description Document	With each MOE delivery	3	H, E	I
MO-11	MOE Operations Procedures	Draft 2 weeks prior to formal test of procedure	3	H, E	A
		Final at formal test of procedure	3	H, E	A

No.	MISSION OPERATIONS ELEMENT	DUE DATE, MATURITY	QTY	MEDIA	CAT
MO-12	MOE Design Specification and Description	Draft 2 weeks prior to M-PDR	3	H, E	R
		Final 2 weeks after M- CDR	3	H, E	R
MO-13	Flight Operations Team Training Plan	Draft 6 weeks prior to first training session	3	H, E	R
		Final 2 weeks prior to final MOE installation in MOC	3	H, E	R
MO-14	MOE Requirements Facility Implementation Plan	Draft 2 weeks prior to M-PDR	3	H, E	R
		Final 2 weeks after M- PDR	3	H, E	R
MO-15	MOE User's Manual	With each MOE delivery	3	H, E	I
MO-16	Inputs to LDCM Project Database	Every 3 months		E	
MO-17	MOC Installation Plan and Procedures	M-CDR, Preliminary	3	H, E	R
		6 weeks prior to MOC installation, final	3	H, E	R

4.0 DESCRIPTIONS OF REQUIRED DATA

TBD